**Transport tracer for AeroCom III model experiments**

**Transport tracer:**

* CO with a 50-day lifetime (exponential decay rate = 2.315x10-7 s-1) and prescribed same sources for all simulated years.
* Prescribed sources:
  + CO from anthropogenic emissions: CMIP6, 2010.
  + CO from biomass burning emissions: CMIP6, 2010.
  + CO from CH4 oxidation: assuming a fixed CH4 concentration at 1760 ppbv, CH4 lifetime of 8.5 years (exponential decay rate = 3.73x10-9 s-1) to form CO with a CO molar yield of 0.86.
  + CO from anthropogenic NMVOC oxidation: total anthropogenic NMVOC emission from CMIP6 2010 (aVOC) with fixed decay lifetime of 1 week (exponential decay rate = 1.65x10-6 s-1) to form CO and a CO molar yield of 0.70.
  + CO from biogenic NMVOC oxidation: total biogenic NMVOC emission (bVOC) will be provided that shares similarity with isoprene emission. bVOC has a fixed decay time of 1 day (exponential decay rate = 1.157x10-5 s-1) to form CO with a molar yield of 0.40.